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ABSTRACT

Increasing attention is being paid today to the place of science in general education at the preprimary, primary, and secondary levels. Educational authorities and specialists in many countries throughout the world agree about the important role that science should and can play in the context of education, but specific aims and objectives must be clarified and then translated into a set of educational activities. In May 1987, UNESCO organized an interregional workshop in Pyongyang, Democratic People's Republic of Korea, that focused on efforts to promote the dissemination of learning materials in preprimary, primary, and secondary curricula, and to develop national, regional, and interregional cooperation. The learning materials are intended to help children acquire scientific concepts and technical skills. This publication describes 40 materials, intended for kindergarten use, that were selected for exhibition at the workshop. The materials teach such skills as counting; collecting objects; tracing objects; distinguishing and naming colors; singing; matching numbers and words; making patterns; assembling objects and pictures; recognizing letters; matching numbers and geometric forms; and remembering. Each of the materials is illustrated with a color photograph, and the purpose, structure, and method of use are described. The materials exhibited at the workshop were produced in the Democratic People's Republic of Korea, the People's Republic of China, and Brazil. (BC)

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LOW-COST SCIENCE AND TECHNOLOGY MATERIALS AT KINDERGARTEN LEVEL

(Examples of National Institutions of Democratic People's Republic of Korea, People's Republic of China and Brasilia)

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LOW-COST SCIENCE AND TECHNOLOGY MATERIALS AT KINDERGARTEN LEVEL

(Examples of National Institutions of Democratic People's Republic of Korea, People's Republic of China and Brasilia)

INTRODUCTION

1. In many countries, in all regions of the world, educational authorities and specialists are giving increasing attention to the place of science in general education at the pre-primary, primary and secondary levels.

2. There seems to be some general agreement among them regarding the important role that science should play, and can play, within the context of education; and on the need to give children opportunities to develop their natural curiosity, the use of their senses and their ability to think and act within their natural and social environment.

3. But the picture is not so clear when it comes to the specific aims and objectives to be attained, and even less so regarding the ways of translating those objectives into a set of activities that may help the children, appropriately and efficiently, to acquire the scientific concepts, the technical skills and the attitudes which they will need: How should classroom work be organized for those objectives actually to be achieved? What sort of pupil participation could be envisaged? What is the role of the teachers in all this? What materials will they have at their disposal, for their own work and for their pupils?

4. During the last two decades efforts have been made to introduce science and technology education in pre-primary, primary and secondary curricula. But these efforts have not always been successful because they have not drawn from everyday life examples and meaningful experiences with obvious scientific and technological applications. Furthermore, various experiments have been conducted during this period on the production and use of low-cost equipment making use of resources available locally. Unfortunately, these experiments have not always yielded the expected results, because those responsible for implementing them have not always had the time or the motivation nor have the means made available been sufficient.

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5. This is why Unesco organized in May 1987 at Pyongyang in the Democratic People's Republic of Korea, an interregional workshop to focus on the efforts already made and the recommendations put forward to promote the dissemination of innovative materials and equipment and develop national, regional and interregional co-operation.

6. To follow on this workshop, it has been foreseen that a guide book with examples would be produced and disseminated. The photo-album which is presented here is intended to show to readers the materials and equipment made in the Democratic People's Republic of Korea, the People's Republic of China and in Brazil and which were selected for exhibition at the workshop. Furthermore, it aims at stimulating new initiatives and opportunities for national, regional and interregional co-operation.

The proceedings and papers of the Pyongyang interregional workshop may be obtained from the following address:

Division of Primary Education
Literacy, Adult Education and
Education in Rural Areas
Unesco
7, place de Fontenoy
75700 Paris
France

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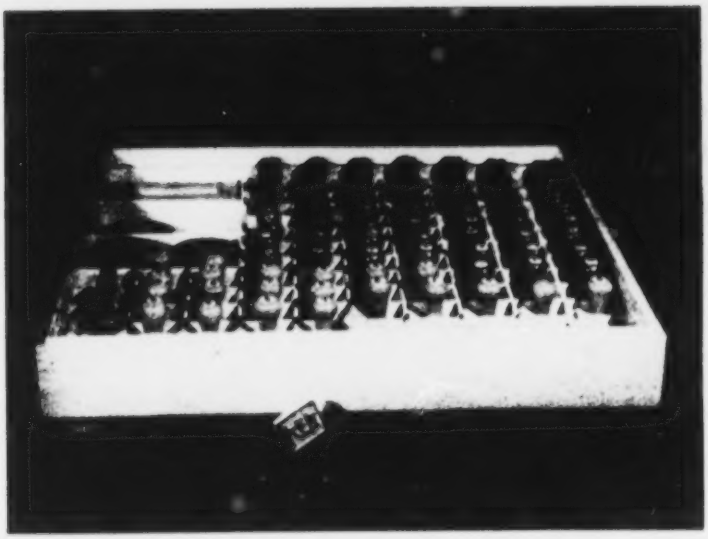

Seals for Words and Counting

Purpose:

This teaching aid helps in writing after the model provided and in learning the names of numerals. It is valuable for learning to count and in playing class games. The arrangement of the seals in the box displays the structure of the decimal number system which is thus made apparent. It should help the child to develop a number image, to write numbers and apply rules of addition and subtraction to them.

Structure:

The box measures 58x52x6 cms. It is subdivided into cells in which the seals are fitted. These have numbers written on them. Some have pictures. An ink pad is also provided for stamping with the seals.

Method of use:

The child should practise writing by means of the letter stamp provided. If the picture stamp is given, the child should write the letter corresponding to the picture and may draw as many circles as the number represents. After examining and using the board, the child may write answers to addition and subtraction problems using the formulas provided.

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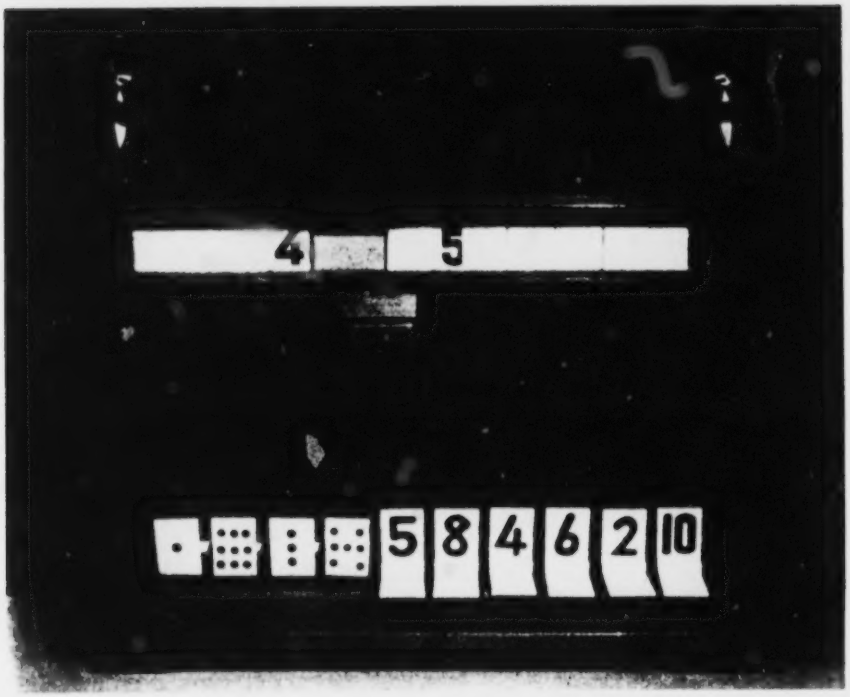

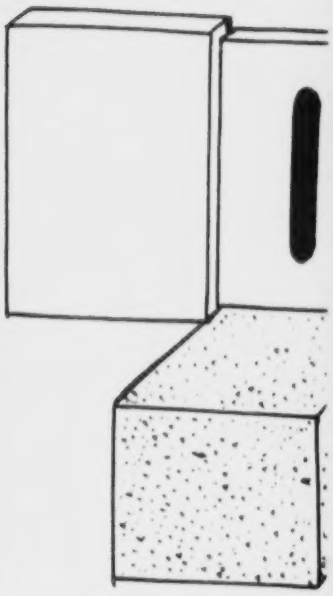

Comprehensive Teaching Material for Counting (1)

Purpose:

It helps to make children understand the counting principle from one to thirty.

Structure:

Thirty square wooden pieces consisting of:
— 10 pieces with numbers 1 to 10.
— 20 pieces painted the same colour and mounted on rows of 10 each to demonstra the decimal system. A magnet-pasted board, a picture rotating board, sounding box circ and number board.

Method of use:

Count while moving the square pieces.
Count while pointing at the pictures and do mental counting.
Count with the help of sound.

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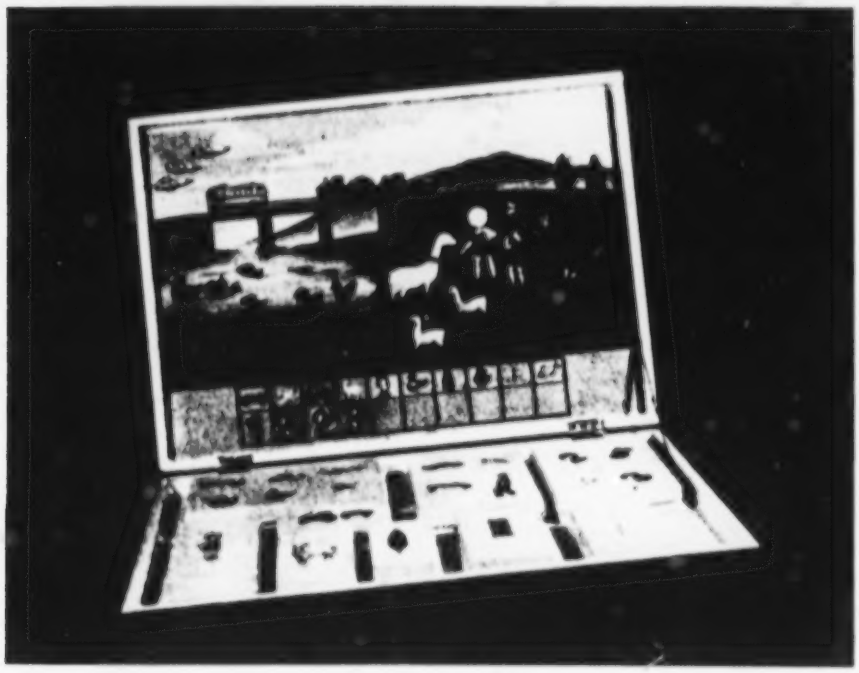

Comprehensive Teaching Material for Counting (2)

Purpose:

Pictures used to count from 1 to 10. The aid may be used to help number writing, addition and subtraction, dividing and collecting.

Structure:

It is in the form of a wooden box. Inside the lid are pictures illustrating various numbers of objects, trees, flowers, animals, air-planes, etc. Also, there is a picture board where numbers can be fixed by magnets. In the box are various squares and rectangles with pictures painted on them.

Method of use:

Make the children count the items on the pictures. Practise number writing.
Teach dividing and gathering, addition and subtraction.
Make the children visualize numbers by means of the pictures.

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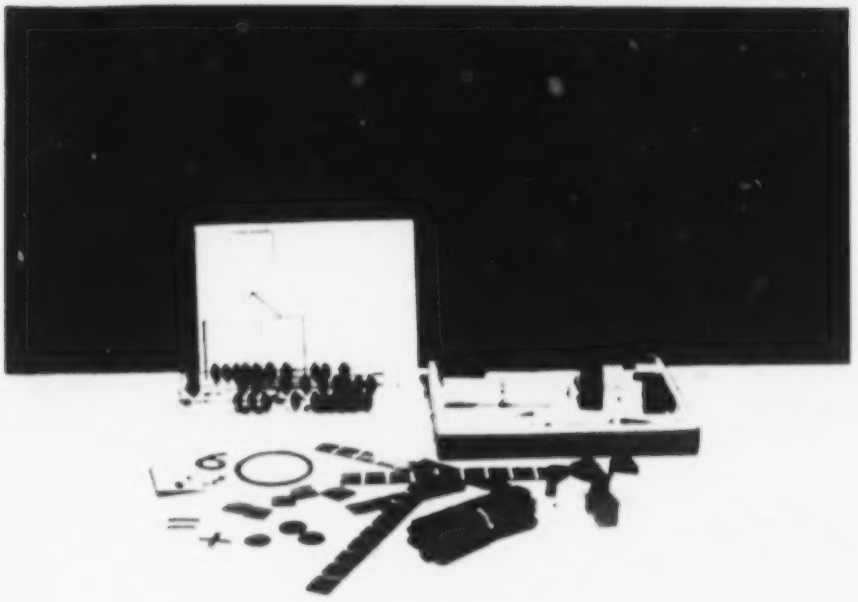

Kit for Counting Operations (1)

Purpose:

To illustrate numbers, the operations of adding and subtracting and general ideas c space.

Structure:

In a wooden box, there is a set of teaching aids such as an operation board, a counte circles, wooden squares, counting sticks, a square table, etc.

Method of use:

The wooden squares may be used to compare "more" with "less", form pairs and d operations to give a general idea of space, and illustrate operations of plus or minus

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Box for Counting Operations (2)

Purpose:

To be used by children in the classroom and for revising after school.

Structure:

The box contains the following teaching aids:

number card:	used for learning numbers and the operations of adding and subtracting.
picture card:	for illustrating numbers from 1 to 10.
mental calculation card:	for counting numerals between 1 and 10.
square pieces of wood:	for operations of dividing, collecting, adding and subtracting.

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dividing and collecting board:	a number and flower table to help count from 1 to 10.
colour board:	for making various kinds of shapes such as flower, gold fish, c. duck, bird, etc. using cardboard pieces of geometrical sha (rectangles, triangles, circles).
various dice:	used in a game to give practice in using numbers.
counting sticks:	for separating and collecting numbers and for counting betwe 1-30.
number arranging board:	for ordering numbers and counting from 1 to 10.
dividing and collecting box:	containing the various pieces used in practising the operations dividing and collecting.

Separating and Collecting Teaching Aid

Purpose:

Can be used for teaching division and collecting to kindergarten children.

Structure:

The aid is made of wood and consists of two main parts. In the upper part there are two grooves in the shape of an arch. These are used for counting with balls. In the lower part there are 3 pairs of magnetic sliding pieces for displaying the numbers and the illustrations (trees, etc.). The control knob is behind the board. The two parts are hinged together and can be folded. Instructions for use are found at the back.

Size: 59x23x56.5 cms

Method of use:

Balls are placed in the grooves. Collecting is done by pulling out wooden pieces on either side. In the lower part different teaching aids can be attached to the sliding pieces.

In a drawer at the bottom are the display pieces. Counting sticks and number cards are used for showing collecting and separating.

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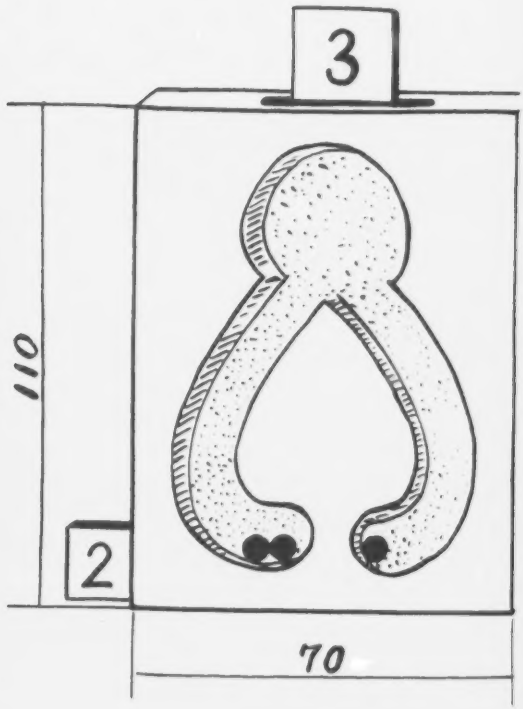

Teaching Aid for Separating and Collecting Operations

Purpose:

To explain the principle of collecting and separating for numbers between 1 and 1

Structure:

The ball-rolling boards are made of wood (size: 11x7 cms). A groove is cut in t centre of the board in the shape shown. Number-cards can be placed in three slots fou on the sides and the top of the board.

Size of the cards: 1.5x1.5 cms

Number of balls: 10

Method of use:

Place any number of balls (between 1 and 10) in the centre of the groove pattern a indicate this by the corresponding number card. By tilting the board, the balls w separate into the two arms of the groove pattern. Count and insert the correspondi number cards in the slots.

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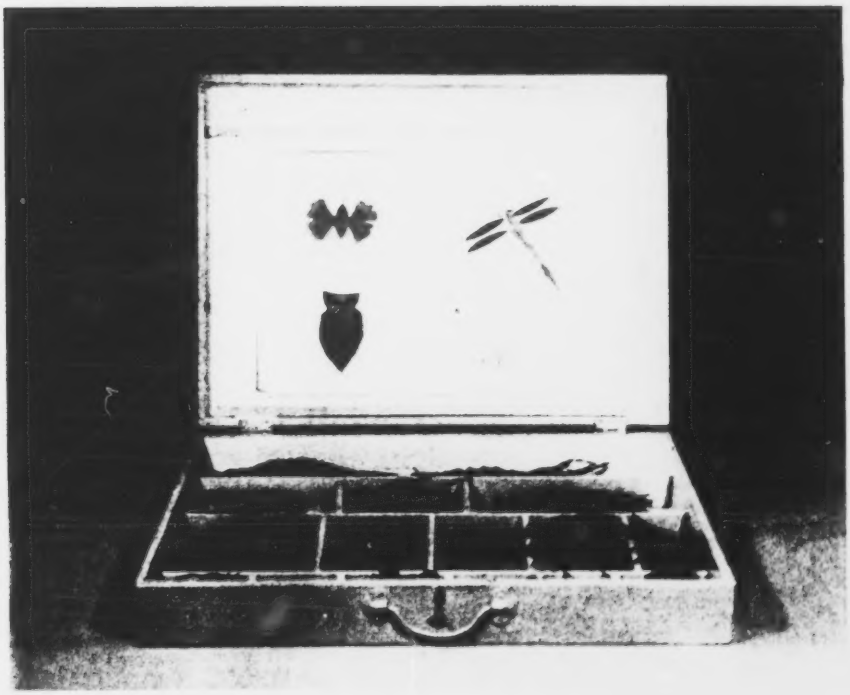

Teaching-aid for Tracing the Shape of Leaves

Purpose:

In the process of tracing various shapes with different leaves, children develop their imagination and powers of observation.

Structure:

Picture models and various leaves are kept in separate compartments in the wooden box (such as chestnut, willow, jujube, plum, maple, poplar, apple, etc.).

Method of use:

Give out the leaves to the children and show the picture model.

The shape of the leaf can be traced by placing the leaf on a sheet of paper. Alternatively, the leaf can be stuck on the display board.

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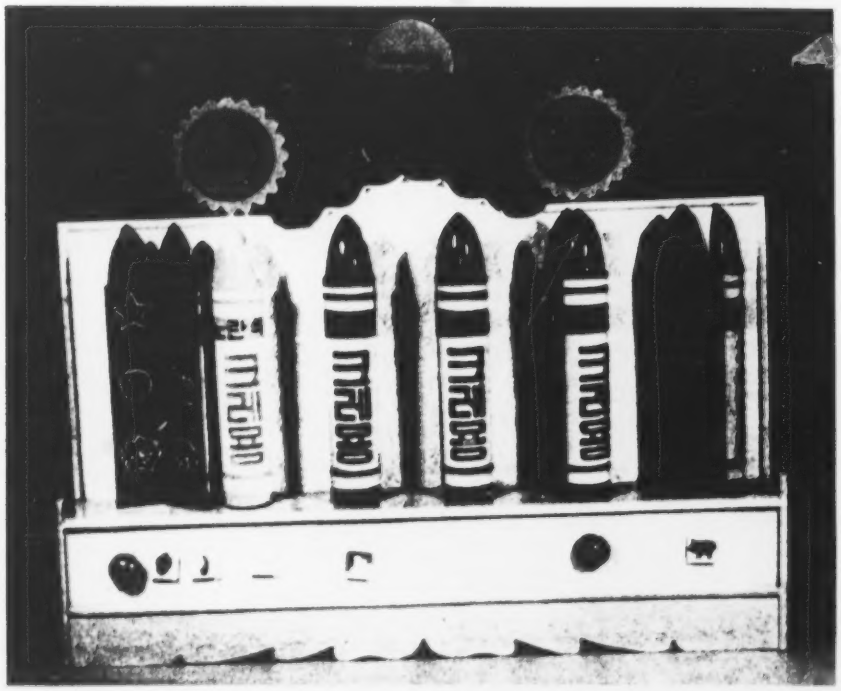

Material for Teaching Colour Discerning

Purpose:

To help children in distinguishing colours and naming them correctly.

Structure:

The material consists of sticks made of wood shaped and coloured to imitate 6 colo crayons, cut down the middle. The wooden crayons are stuck to the board. Actual crayo of the same colour are placed behind the painted imitations.

Size: 80x11x48 cms

Method of use:

Show the picture and teach about the colour. Let the children choose the colo designated by the teacher.

Draw with actual crayon on white paper and teach the name of the colour.

Ask a child to come forward and pick up a colour print which you have designat among many prints and place it underneath the corresponding crayon.

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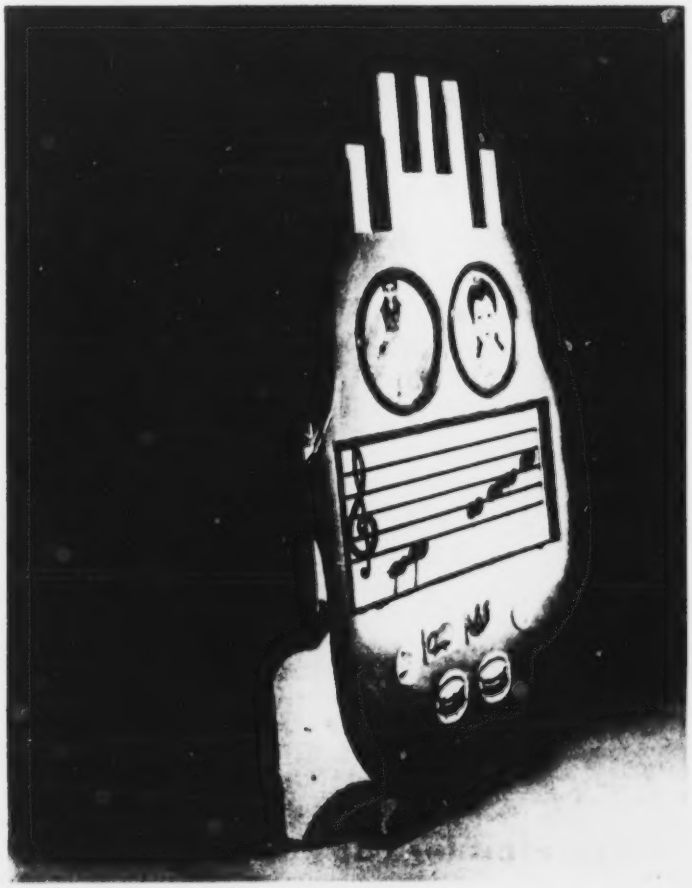

Teaching-aid for Singing

Purpose:

To teach musical notation and methods of reading music and to sing.

Structure:

On the front face of the teaching-aid a music sheet is stuck with the scales drawn on it. A child's piano is attached to the back. Teaching-aid pieces such as sound tags, pictures of musical instruments, etc. with magnets are contained in a box.

Method of use:

The aid is used for guidance on breathing, posture, forming the lips and singing a note.

Also, it can be used for teaching beating, stressing and listening to the scales.

It gives an idea of the musical scale, teaches the notes and guides on the beat.

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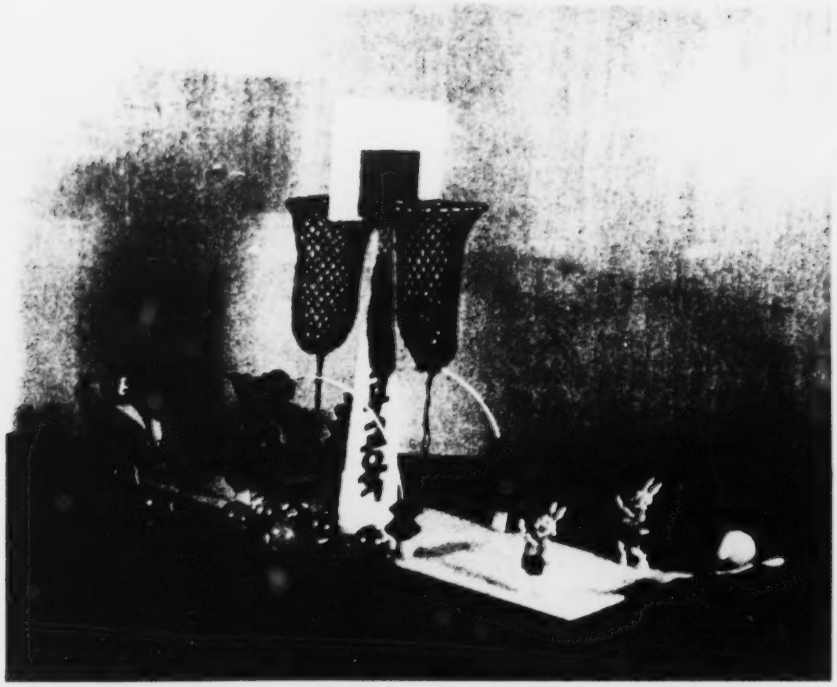

Apparatus for Ball and Ring Game

Purpose:

The game consists of putting as many balls into a net ring as possible. While playing the children learn to consolidate their knowledge of language.

Structure:

The equipment consists of a supporting board with a spring board attached to each end for launching the balls. At the centre of the board is a stand with two rings fitted with nets to catch the balls. Two sets of counting beads are arranged on circular wires on either side of the central stand. Twenty ping-pong balls painted with pictures of objects or numbers are contained in a box.

Size: 65x17x42 cms

Ring diameter: 10 cms

Method of use:

The game is played between two players. The teacher calls out a name like "cucumber" and the players pick up the ball with a cucumber printed on it and launch into the ring. When a ball passes through the ring, a bead is moved on the wire counter.

With numbers the game may be played for counting up to 30.

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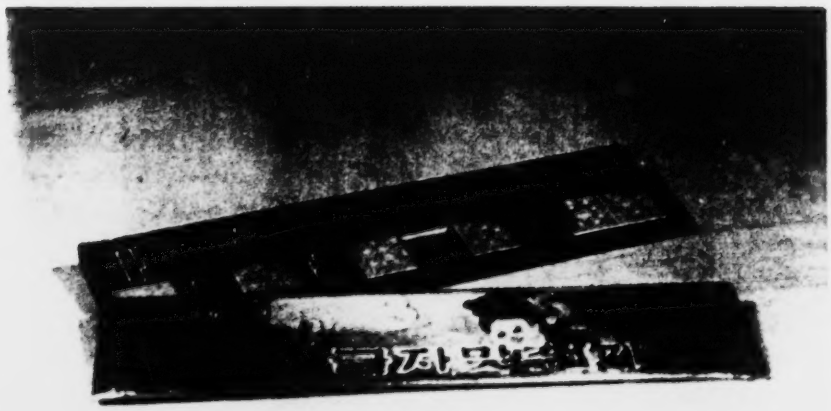

Toy for Matching Number and Word

Purpose:

Make the children understand and name the numbers from 1 to 10. Cultivate the habit of thinking and concentrating.

Structure:

In a wooden box, there are 10 square pieces with the numbers printed on them fitted so that they can be slided out of position. The lower line contains 4 square pieces. The size of each square is 3.8x3.8x0.5 cms. The size of the box is 41x9.5x1.8 cms.

Method of use:

Move the pieces from right to left using the lower line, in order to arrange them in ascending order from 1 to 10. The pieces with names on them can be moved and arranged in the same way.

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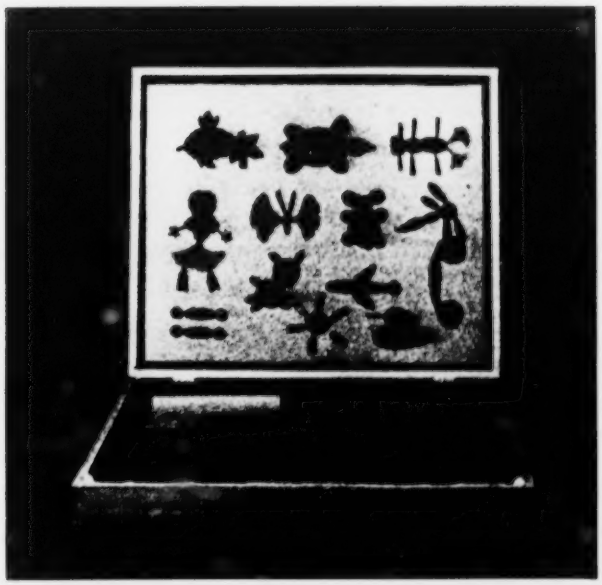

Toy for Making Patterns with Leaves

Purpose:

To develop ability to make figures and stimulate creativity.

Structure:

Material: cardboard shapes of tree leaves, petals and fruits in a box. Inside the l there are 50 model pictures.

Method of use:

Using the cardboard shapes, trace out the same patterns as shown in the mod picture on the lid.

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Carp-assembling Toy

Purpose:

To consolidate what has been learnt during lessons on numbers.

Structure:

Numbers from 1 to 10 are marked on the fish-shaped rubber plate. The fish model consists of 22 pieces of wood on both sides: the head and 10 parts of the body making up one side.

Problems on addition and subtraction related to numbers are written on the pieces of wooden fish. Answers correspond to numbers on the rubber plate. Two wheels are attached to the lower part of the fish model.

Method of use:

The player puts a piece of the wooden fish into position using the rubber plate number as the answer to the problem set on the piece and screws it down.

The teacher lets the player use square pieces or calculating sticks in order to solve the problem.

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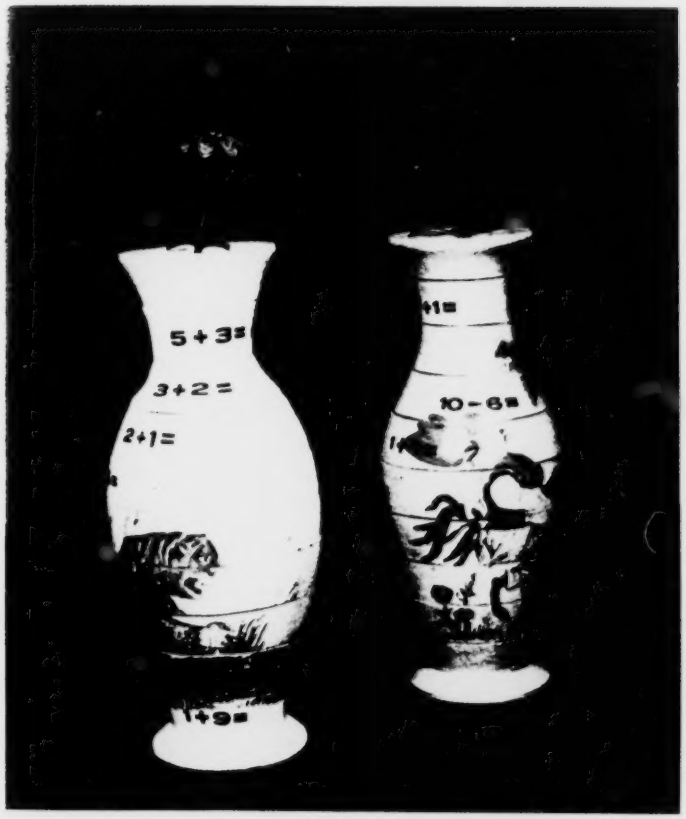

Assembling Flower Vase Toy

Purpose:

Consolidate what has been learned in lessons on calculation.

Structure:

Wooden flower vase subdivided into 10 parts. Problem on calculation is written o each part. Answer corresponds to the position of the piece in the assembly (for exampl 10-8 = ; 2+4 = ; 6-5 = ;...). There is a picture on the vase and a hole for a flower a the top of the vase. The biggest flower vase is 15 cms in diameter and 37 cms high.

Method of use:

The player fits the parts of the vase on the central axle into position according to th answers he gets to the problems.

If a mistake has been made in the calculation, the vase will not have the proper fin shape. The player can correct his mistakes as he finds them.

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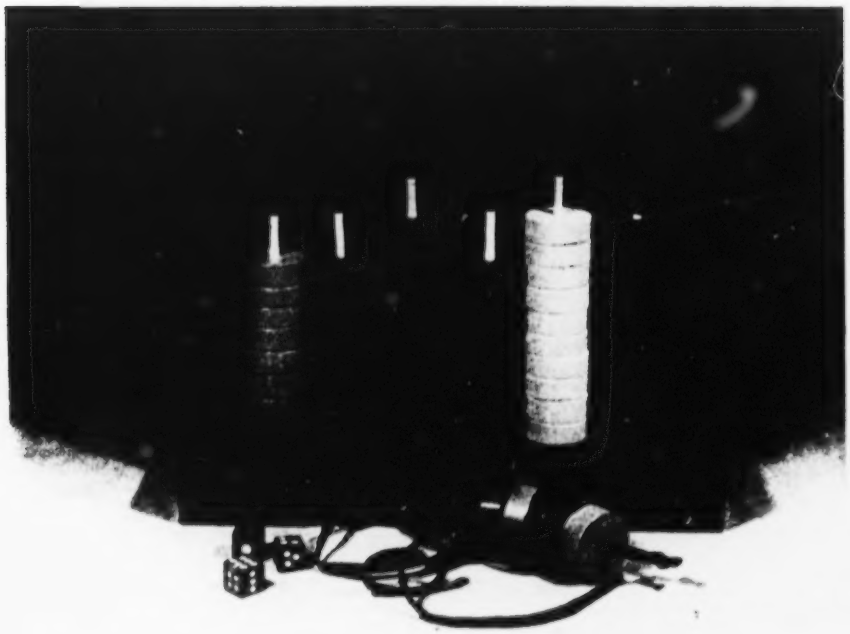

Coloured Disks Toy

Purpose:

To distinguish colours.

Structure:

A frame with six vertical rods. Each rod can fit 10 circular coloured disks with central holes. The colours are red, blue, yellow, green, brown and orange.

Size of disk: 5 cms diameter; 1 cm thick.

Six strings with the same colours as the disks.

Dice: 2 (one with the six numbers, second with the 6 colours).

Method of use:

Put disks with the same colour through the six rods.

Roll the two dice together.

Put as many disks of the right colour as indicated in the throw of the dice.

Pass a cord through the disks paying attention to the colour and the number.

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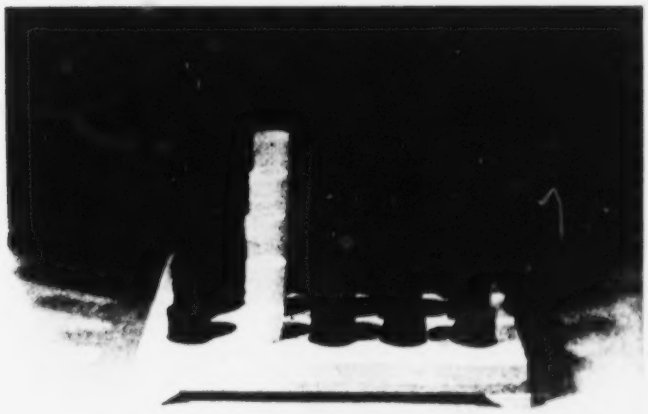


Standing Bars Toy

Purpose:

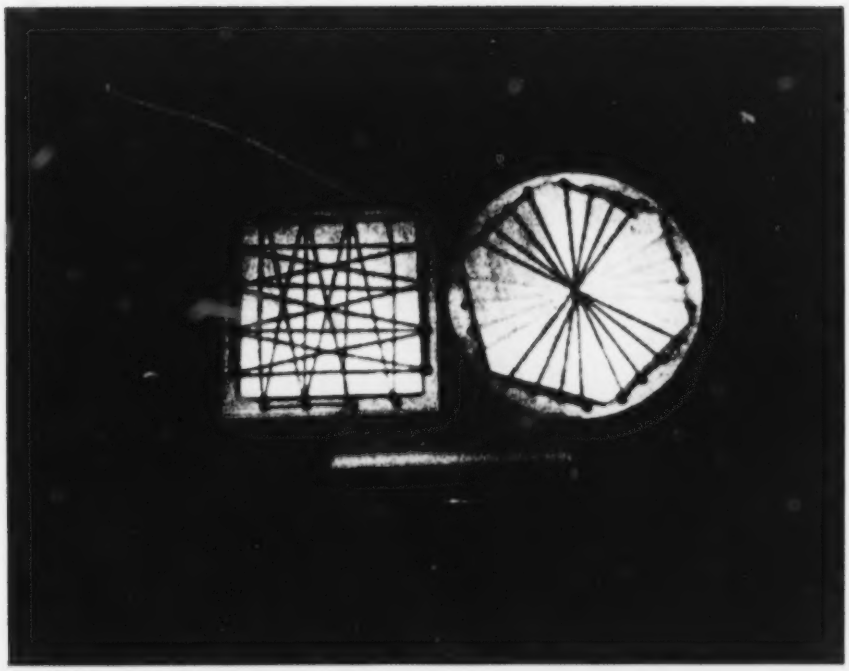
To distinguish colours and observe the length of objects.

Structure:

Bottom board of 27x27x4 cms with 25 holes. Five sets of 5 bars of increasing lengt The sets are painted red, yellow, green, blue and orange respectively. The shortest bar is cms long, and the others are respectively 2.5 cms longer than the preceding one. Tl diameter is 3 cms.

Method of use:

The bars can be stood in the order of their height, or according to colours regardless heights. They can also be aligned with bars of same heights together.



Toy for Making Patterns with Thread

Purpose:

To develop manipulative skills and the imagination of children.

Structure:

The game consists of 3 kinds of toys (a circle, a square and a rectangle). All the playing boards are made of wood and have holes of the same size around the perimeter (0.6 mm). Strong coloured threads are supplied, which can pass through the holes. Diagrams of some patterns are provided.

Method of use:

Looking at the diagram, make the pattern with needle and thread. Invent new patterns when you can.

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Game of Assembling the Picture (1)

Purpose:

To foster observation and imagination in children.

Structure:

The toys for this game are made up of 5 or 6 parts each with elements of a picture o one of its 4 faces. The size of the full picture board is 20x20x4 cms. The parts fit in a wooden frame as shown.

Method of use:

First show the model picture. Find out the base of the picture from the compone parts and build up the picture from the base.

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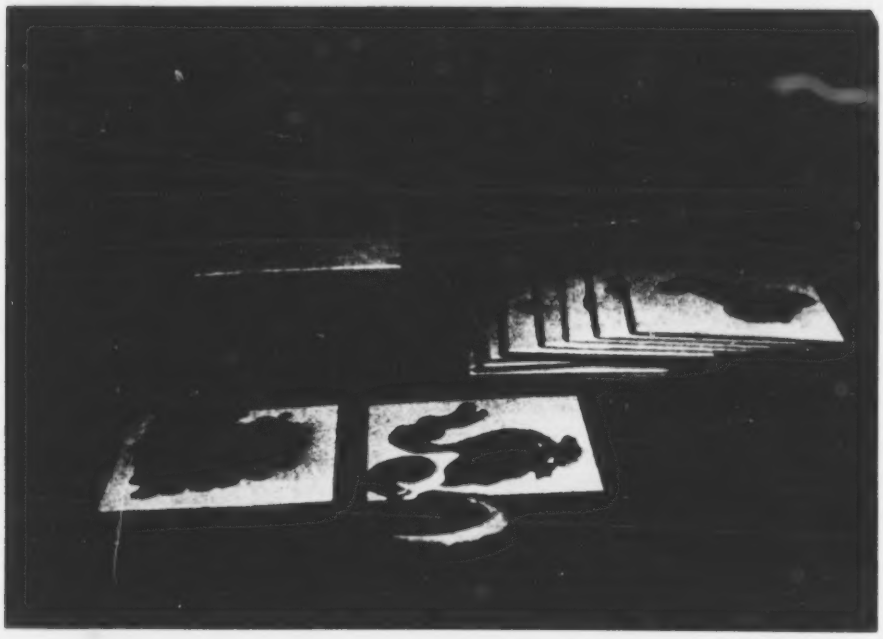

Game of Assembling the Picture (2)

Purpose:

The game calls upon the imagination of children and develops their sense of observation and their handling skills in making various animals, fruits or technical objects.

Structure:

50 picture puzzles are kept in two wooden boxes. The picture boards are made of wood and are cut to the exact shape of the object to be assembled.

Method of use:

With the pictures in front of them, children are instructed to assemble the pictures from the cut pieces and fit them in their respective boards.

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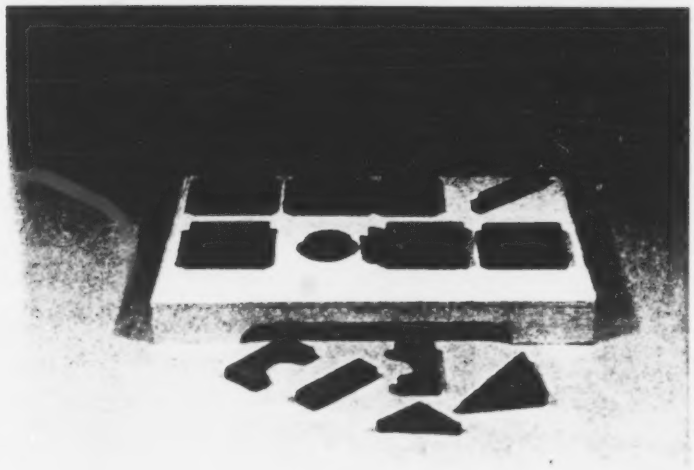


Toy for Making Patterns

Purpose:

To develop ability of observation and handling skills through assembling rectangul patterns.

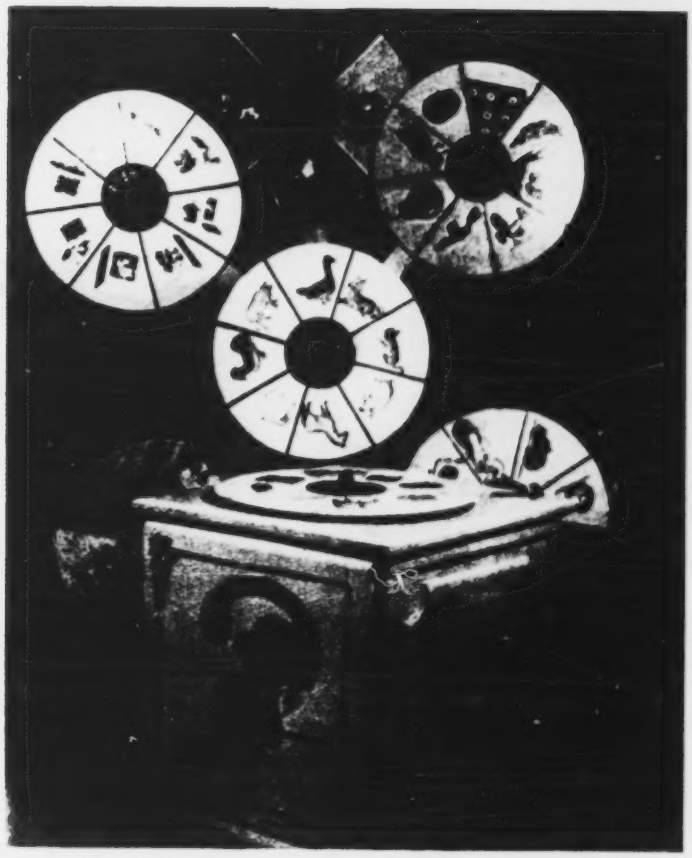
Structure:

On the upper part of the playing board various segments of rectangle are fixed. Tl loose rectangle segments have the same colour as the fixed ones.

Size of the playing board: 27x18x35 cms

Method of use:

Mix the loose segments. Then pick the right pattern and reassemble them to mal rectangles and squares.



Multi-purpose Rotating Disk Toy

Purpose:

The game calls upon abilities of concentration, observation, comparison, memorization, reasoning. It helps to consolidate and revise the lessons learnt.

Structure:

The box in the form of a cube has a central pivot on which disks with painted objects on them can be placed and rotated by hand. A red arrow painted on the box acts as a marker.

Method of use:

For up to 4 children, the box may be placed with the disk horizontal. The game is to be the first to name the object opposite the red arrow when the disk stops.

For collective playing the box may be put on its side with the disk vertical.

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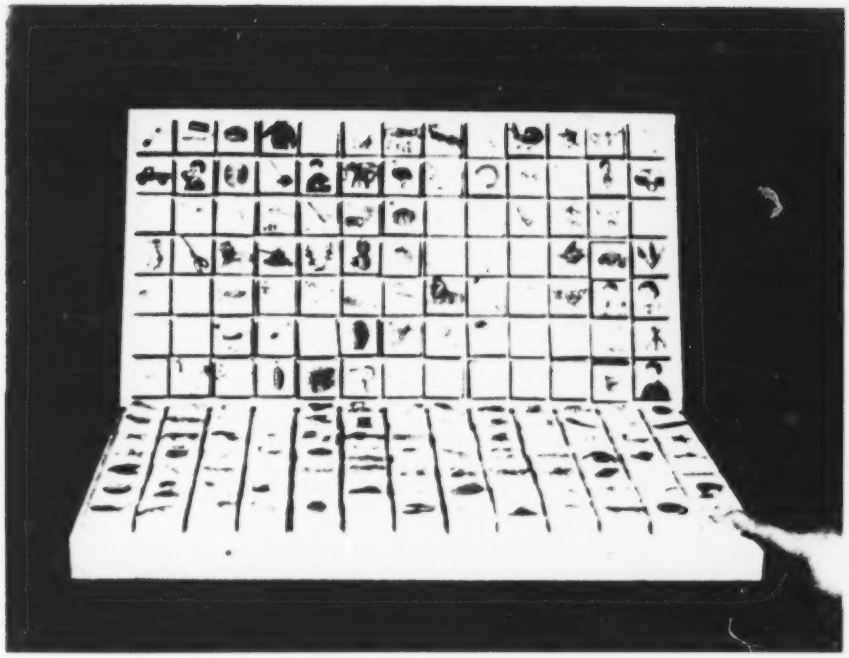

Teaching-aid for Korean Letter Playing

Purpose:

It helps the children to practise words learnt in Korean letter lessons. This fosters th ability for them to name correctly the subjects which they may meet in everyday life and t distinguish them according to a certain standard.

Structure:

2 playing boards with 91 compartments.
A wooden piece with picture which can go into each compartment.
91x2 = 182 pieces.
The words and drawings learnt in the lesson are on the picture board. It contains ne words that can be made by using them.

Method of use:

2-4 children play this game.
Matching the drawings with the words.
Finding out the letters learnt.
Forming words.
Creating the new words from the letters learnt.

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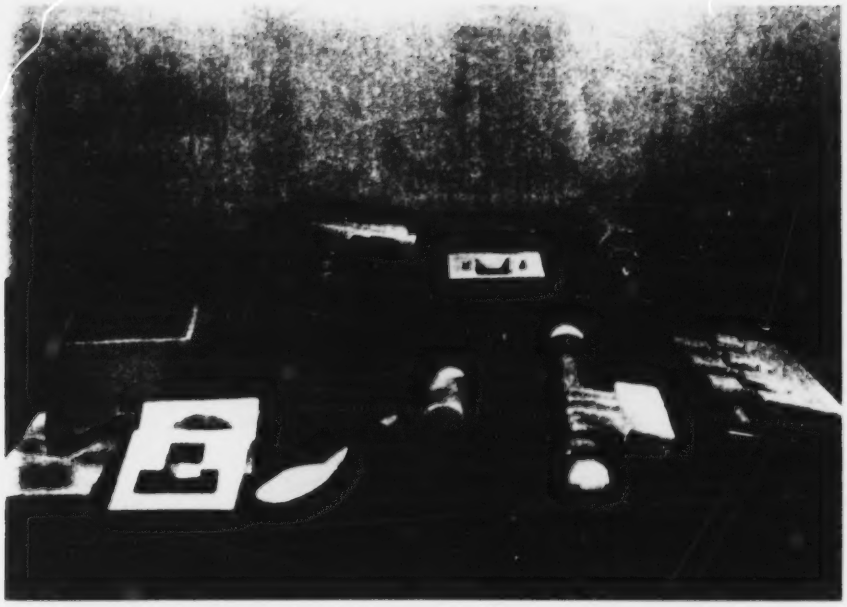

Sand Play Outfit

Purpose:

To stimulate the imagination and the creative sense of children.

Structure:

The material for the sand play is all made of wood and kept in a bag.

2 mops, 2 hooks, 1 hammer, 1 jamming plate, 1 pressing board, 3 shape-making moulds, 1 tunnel, 5 model boards, 6 wooden spades, 15 bowls, 1 sand sieve, 1 flag and water sprayer.

Method of use:

Spray water over the sand with the sprayer. Separate small stones by sieving. Spray sand by the mop and stamp it with jamming stick and pressing board with the shape-making moulds to make various sand ridges. After putting and pressing sand on the shape-making board, make different figures by lifting the board with the spade and bowl. Make the children understand the concepts of quantity and number. Make tunnel using the model; also make up a construction site with farm field, etc.

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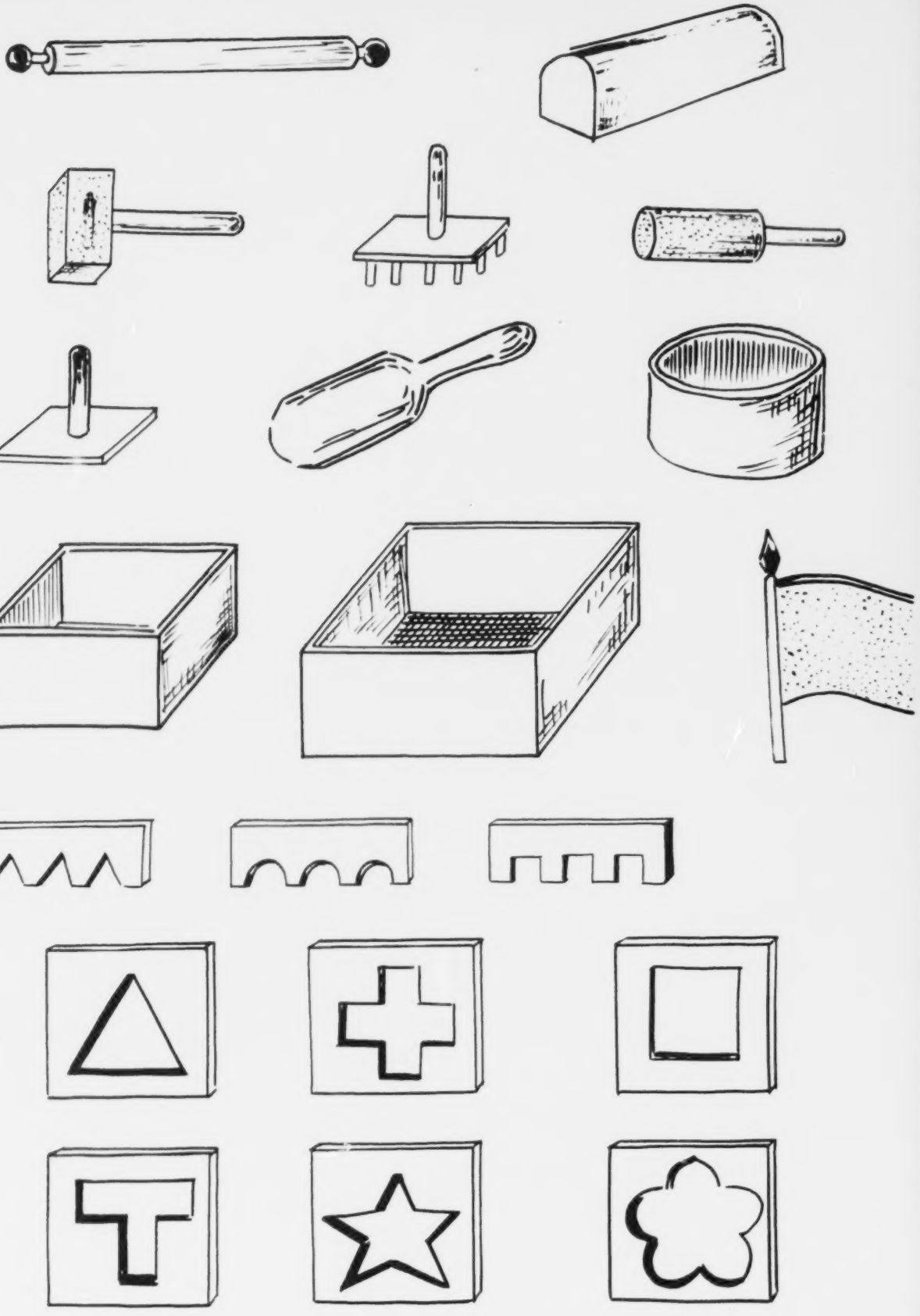

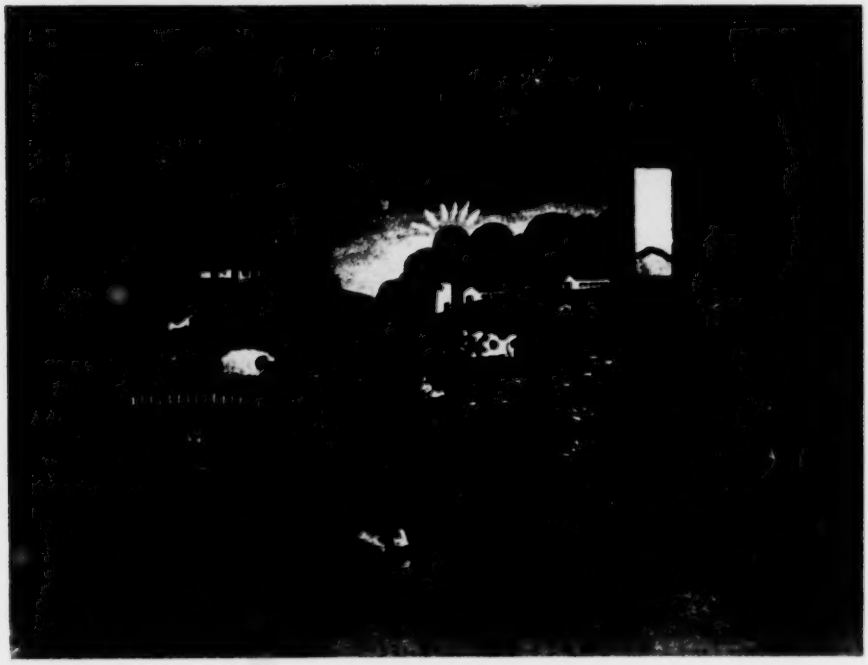

Observation Box

Purpose:

This is used to reinforce the children's knowledge in mother tongue and counting, and to develop their powers of observation.

Structure:

5 background boards; frame for the erection of the background frame; 100 wooden models (30 animals, 20 fishes, 10 birds, 10 fruits, 10 green plants, 10 vehicles, 10 diverse objects).

Method of use:

Name the objects and write out these names and memorize. Learn the concepts of plus and minus. Practise counting, using numerals and ordinals. Compare amounts. Find out examples of objects of the same kind. Develop the memory of words and names.

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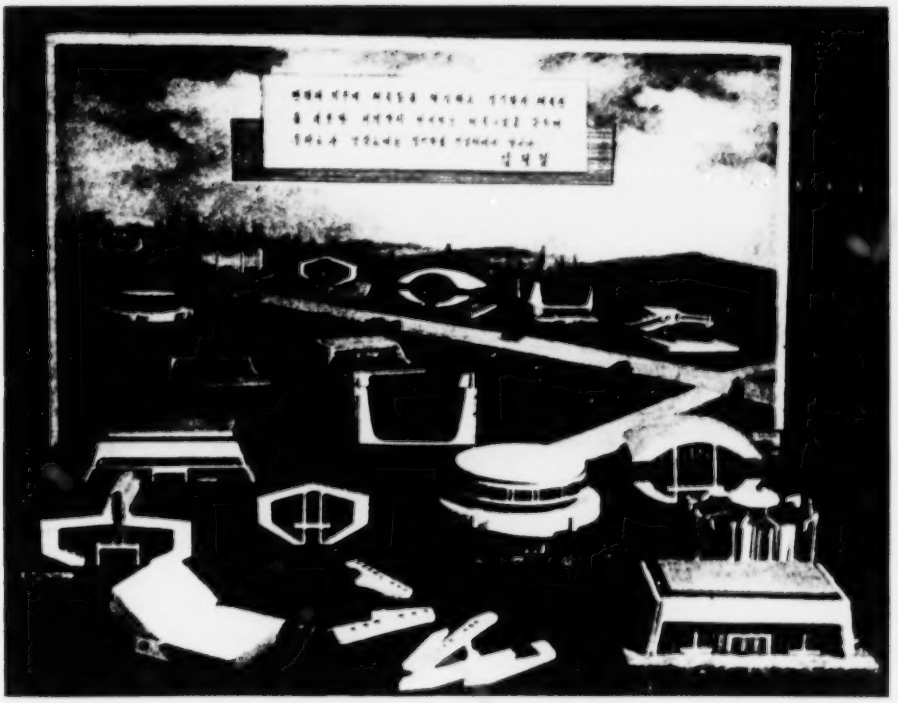

House-assembling Toy

Purpose:

To develop children's abilities to observe, imagine and appreciate numbers ar amounts.

Structure:

Picture of the 10 gymnasium buildings at a sports village.

Ten sets of parts contained in boxes. Each part is marked with a number of circles squares or triangles to identify the part.

Method of use:

Assembling is done after observing the building in the picture.

An assembled model should be taken apart and the children shown the marked part Re-assembling should be done according to the numbers on the pieces. The teacher shou guide the children by calling out the numbers.

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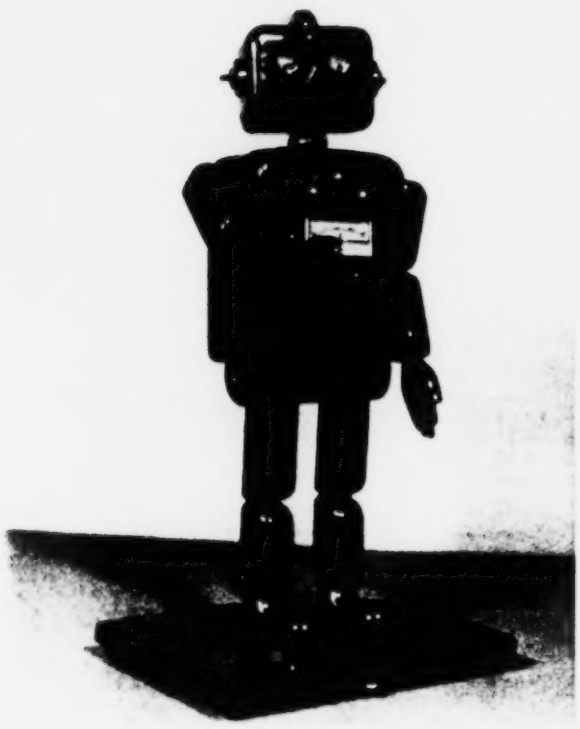


Robot-assembling Toy

Purpose:

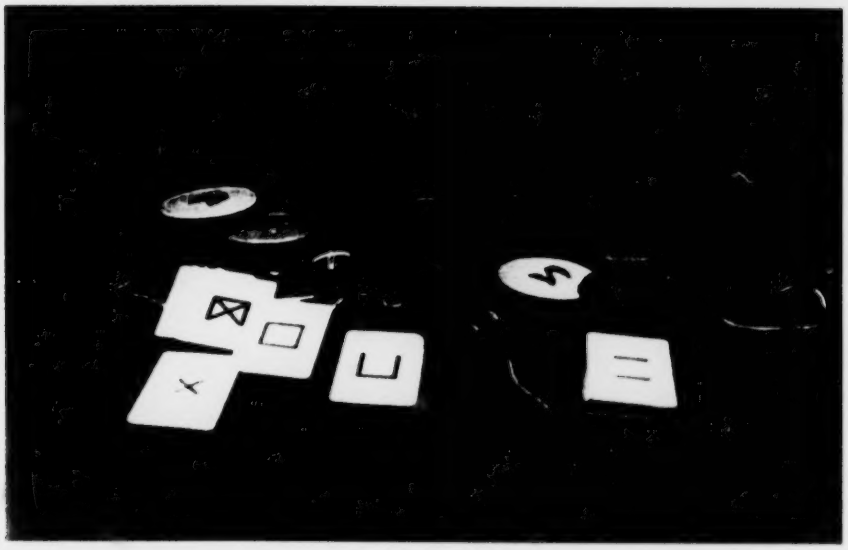
To develop imagination and provide manipulative skills.

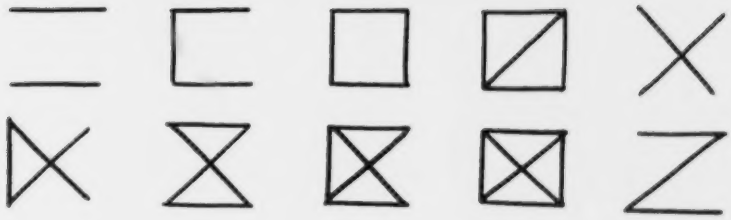
Structure:

All the main parts (head, body, legs and arms) are made of wood. The joints are metal pin to allow for movement. The parts are designed to be assembled in the order from legs to body, arms, hands and head.

Note:

When joining the parts avoid exercising too much pressure.





Toy for Sewing Buttons

Purpose:

To develop manual skills and observing abilities in children.

Structure:

The toy consists of:

Twenty wooden models of buttons, dyed thread, and 20 picture sheets showin different ways of sewing a button.

Diameter of a button is 8 cms.

Method of use:

Each child is given one button and one picture. He should insert thread into th button hole as shown in the picture. Then pull out the thread and do another example

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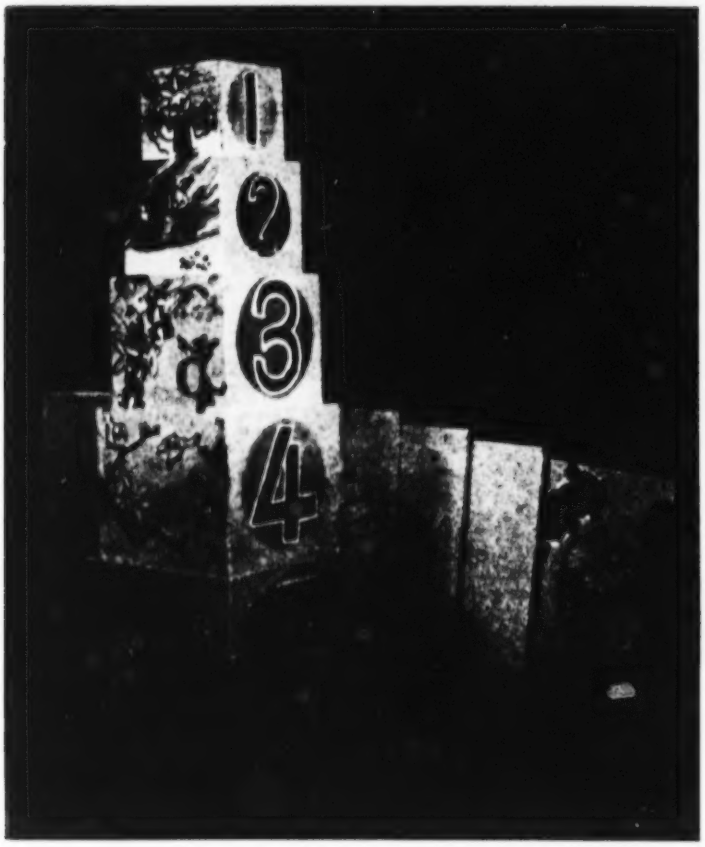

Toys for Piling up Large-sized Boxes

Purpose:

To teach children how to distinguish correctly between different sizes.
Consolidate the general idea of number from 1 to 10.

Structure:

10 wooden cubes of different sizes.
One side of the box is open allowing the smaller cubes to fit into larger ones. The other sides contain pictures, letters and figures.
Size of box: 28x28x32 cms.

Method of use:

Place the biggest box at the bottom and pile the others on top in decreasing order of size. Small children may use a chair, if necessary.

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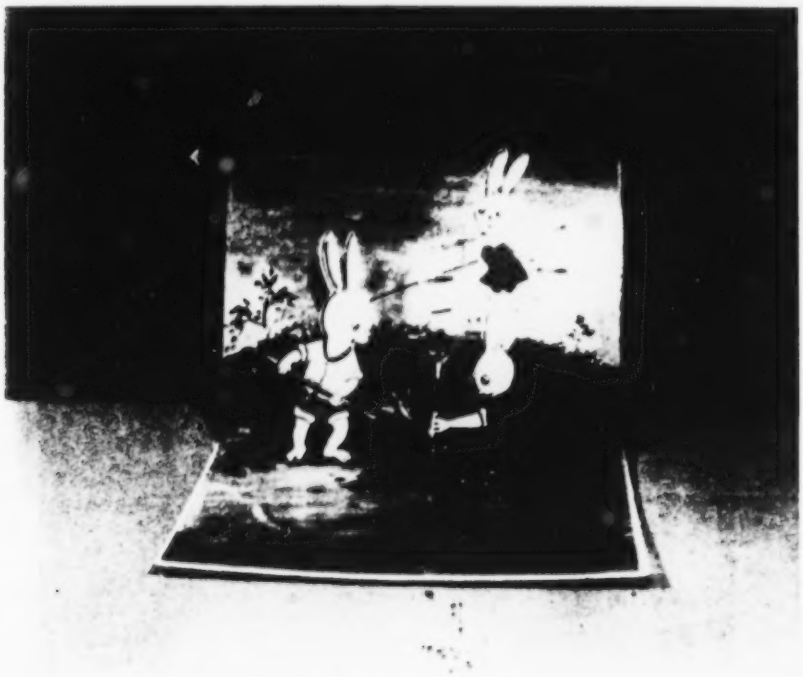

Interesting Picture Book

Purpose:

To help children to understand stories faster by suitable illustrations.

Structure:

Each leaf has a new picture which, when opened, stands out in 3 dimensions.
Size: 38x53x6.5 cms.

Method of use:

The picture book is placed in front of the children. The story-teller speaks fron behind the book narrating the story of the pictures.

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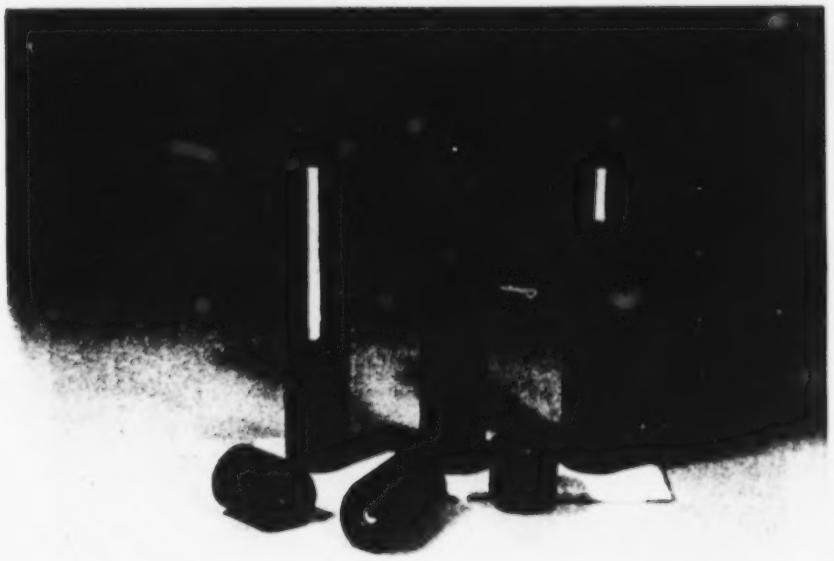

Toy for Building Cylindrical Columns

Purpose:

To cultivate the powers of observation and exercise the imagination of children.

Structure:

On a rectangular baseboard, size 30x10 cms, are mounted 3 upright rods. Wooden cylindrical columns fitted with a central hole are placed on the rods. The columns have been cut into segments at various oblique angles.

Method of use:

Before playing, remove the segments from the axial rods and mix them. The game is to separate the segments by colours first and then fit them on to the rods paying attention to the angles of the sections.

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Game of Assembling Various Shapes

Purpose:

To stimulate attention and observation.

Structure:

The baseboard of size 12x18 cms is made of wood. A set of 10 different figures can b arranged on it. The figures are made of a square board of size 8x8x1 cms on both sid of which are fixed geometrical segments as shown.

Method of use:

Mix the pieces. Find out patterns associated with the baseboard and the square boa and fit the square segments together.

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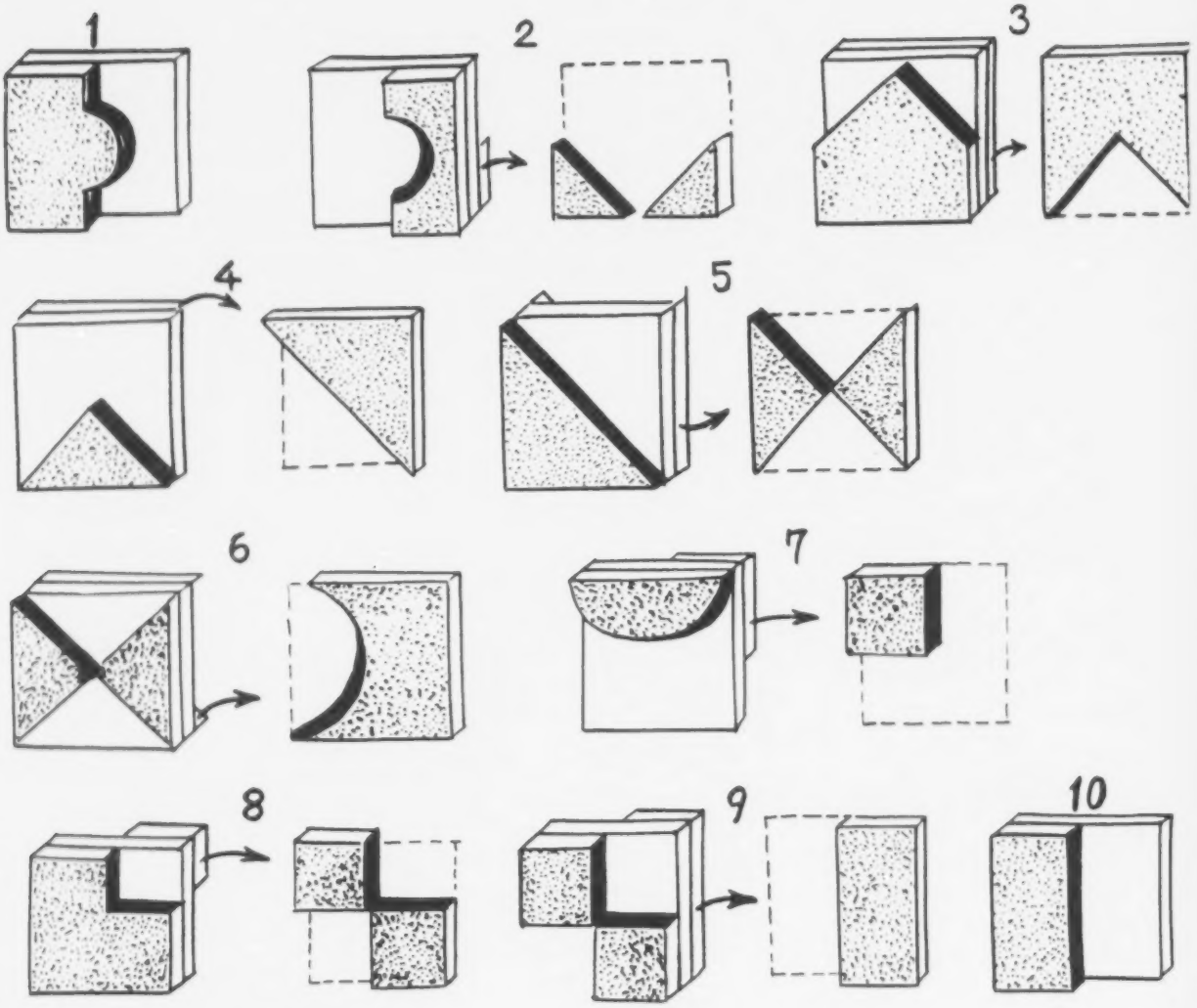
1
2
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10

Toy for Matching the Circle

Purpose:

To develop skills of observation and imagination.

Structure:

Concentric circles of radius 2.5 and 8 cms are drawn in a circular wooden board of si
11 cms in radius. The circular rings are again cut into segments of various sizes. The size
the floor on which are to be fitted the pieces is 22.5x22.5x2 cms. The pattern is drawn
the board.

Method of use:

The inner circle is fitted on the board by means of a central pin. The concentric circl
are arranged by inspection and trial.

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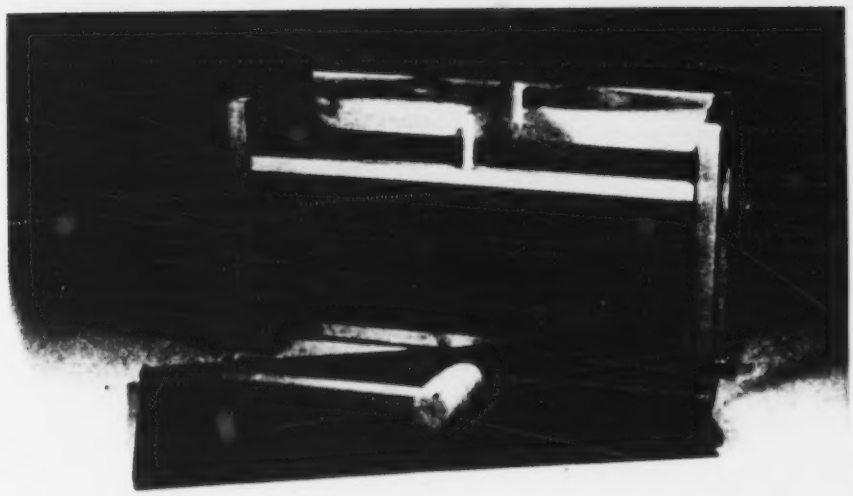

Toy Kit for Assembling a Desk

Purpose:

To foster imagination in children and develop their manipulative skills.

Structure:

The structural elements of this toy are made of wood and consist of the following:

up-board	47x22x1.2 cms
side-board	2 pieces
legs	4 pieces
partition board	1 piece
bar	2 pieces
underleg	2 pieces
backboard	1 piece

wooden hammer, model picture.

All parts are contained in a wooden box (50x26x7 cms).

Method of use:

Assemble the legs and the side-boards and fix the underleg by fitting the feelers into the holes in the legs. Fix front bar and back bar to the corner of the left leg and then fix the right point of the front bar and back bar to the right leg. The partition board is then fitted to the bar of the legs. Finally place the up-board. Use the wooden hammer to fix the joints.

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Toy Kit for Chair Assembly

Purpose:

To foster imagination in children and develop their manipulative skills.

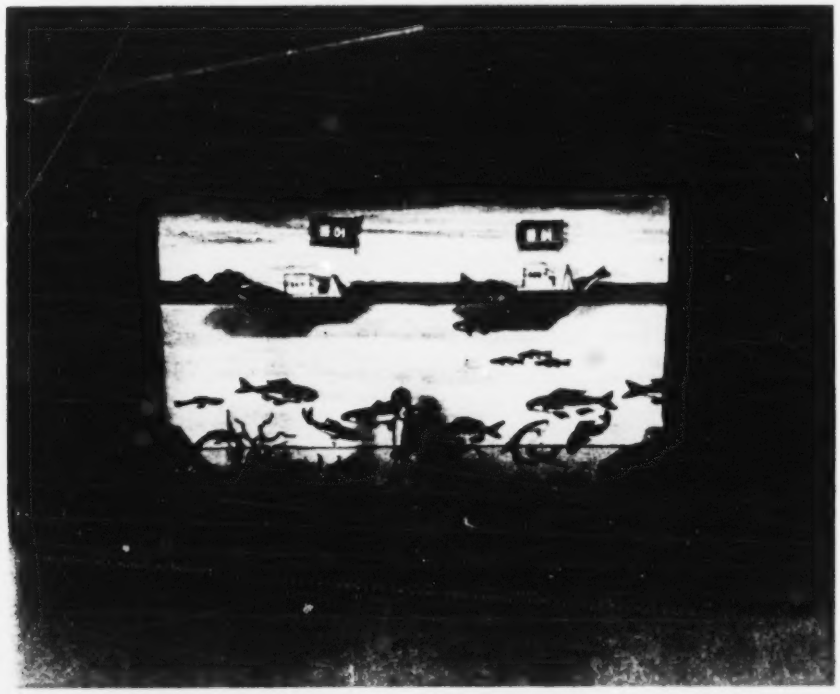
Structure:

All parts are made of wood. They are as follows:

chair seat	4 pieces
seat sides	2 pieces
bars	4 pieces
front legs	2 pieces
back legs	2 pieces
bottom strips	2 pieces
wooden hammer	1
model picture.	

Method of use:

Explain the shape of the chair to the children before the game.
Assemble the parts of the chair in the order according to the model picture.



Visual Aid for Fishing

Purpose:

To reinforce knowledge of counting from 1 to 30 and of addition within range of numbers from 1 to 10.

Structure:

A glass panel is attached to the front face of the aid and allows the sea scenery to be seen. The ship is movable by means of magnets. Several fish made of carton are on the ground. Size of the visual aid: 46x31x10 cms. Two "fishing" rods with a magnet attached to their ends are available.

Method of use:

Count the number of fish caught with the magnet.

Prepare a container for the fish already caught and let the two children practise adding as more fish are being caught.

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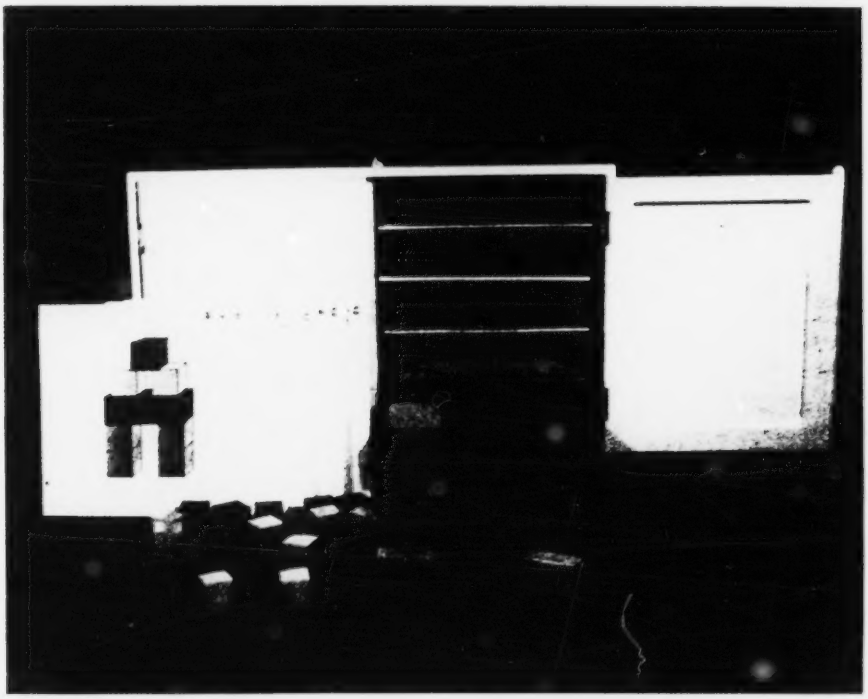

Toy Cubes

Purpose:

To develop skills in assembling cubes and making various constructions according t illustrated designs.

Structure:

The toy consists of a set of 35 cubes of size 2.5x2.5x2.5 cms (10 red cubes, 10 blue, 1 yellow and 5 green cubes); and another set of 21 wooden pieces of various shapes. 3 model designs are illustrated.

Method of use:

Build up the designs beginning with No. 1 and using the appropriate cubes and soli pieces.

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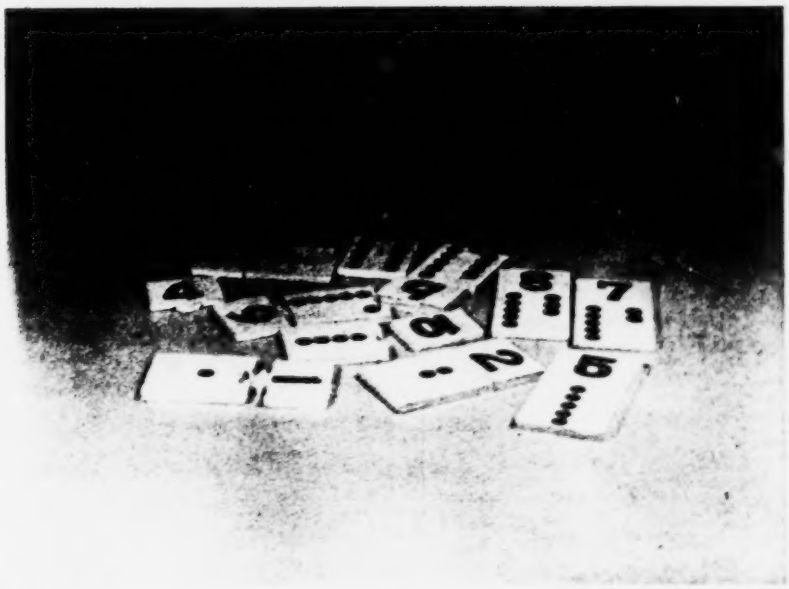

Toy for Matching Numbers

Purpose:

To make children familiar with numbers.

Structure:

A wooden box 25x25x3 cms contains two sets of wooden pieces, size 10x10x0.5 cms. One set is marked with the numbers from 1 to 10, and the other with numbers of coloured spots from 1 to 10 (Size: 10x10x0,5 cms). The pieces from the two sets can be attached to each other, the number corresponding to the number of spots.

Method of use:

The game consists in sorting the numbers in the order from 1 to 10 and attaching the corresponding patterns of spots to each number.

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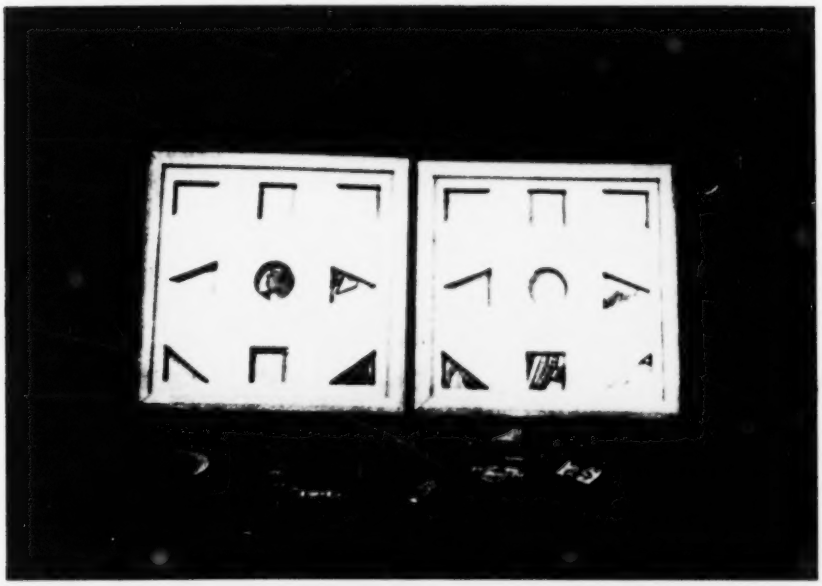

Toy-box for Guessing Names of Pictures

Purpose:

To cultivate observation and reasoning.

Structure:

A toy-box with a sliding cover, contains pictures cut in plywood. The sliding cover i cut with windows of various sizes and shapes. Other pieces are kept in a box.

Size of the toy-box is 28x28x4 cms.

Method of use:

Hold the toy-box containing 1 to 4 pictures in both hands and move it right and left Look at the part of the picture seen through the window and name the object.

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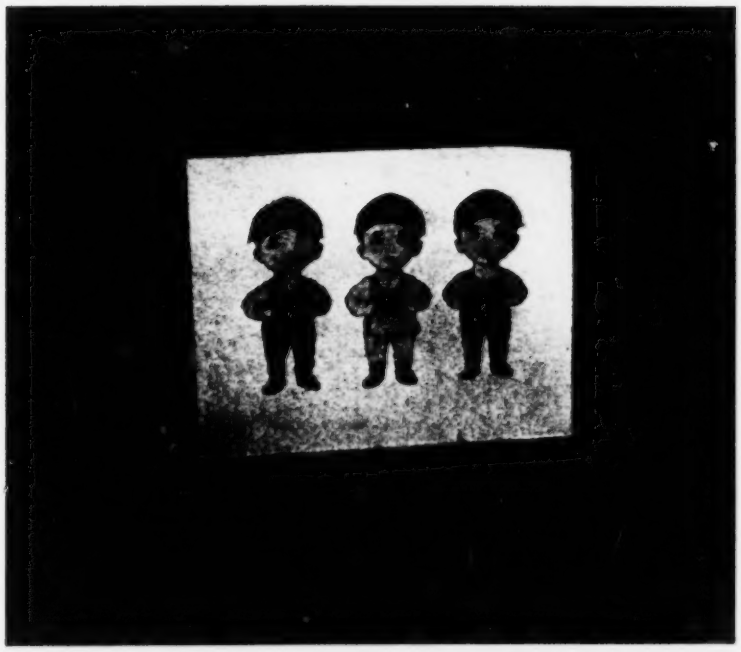

Playing Board for Exercising the Memory

Purpose:

To exercise visual observation and memorizing of details seen for given periods of time.

Structure:

Within a frame made of wood, a picture board is hinged so that it can rotate about a vertical axis. Various picture cards can be displayed or hidden from view by rotating the board.

Size of the playing board is 55x16x64 cms.

Method of use:

Show the picture to children. Then hide it by turning over through 180 and let them describe what they have seen. The time of exposure can be altered according to the children's capabilities.

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